THE EFFECT OF DIFFERENT RETTING FORMULATIONS ON PINEAPPLE LEAF FIBRES PROPERTIES

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I hope my thesis will be useful to other people who are interested to know and gain more information about this project. Thank you.

Muhaiza Mustafa

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ABSTRACT

THE EFFECTS OF DIFFERENT RETTING FORMULATIONS ON PINEAPPLE LEAF FIBRES PROPERTIES

The main purpose of this project is to create a new retting formulation for pineapple leaf that improves the properties of its fibre. Instead of using water retting which takes a long time, chemical retting and enzymatic retting as well as the combination of both chemical and enzymatic retting were also being used. The pineapple leaf fibres produced from all different retting formulations were tested for the span length, single yarn strength and elongation, tensile strength and whiteness of fibres. The effects of different retting formulation on the pineapple leaf fibres properties were determined. Due to complex structure of pineapple leaf stem, it was originally suggested that a mixture of enzyme activities such as amylase and diastase would be needed to free the fibres. The results of pineapple leaf fibre properties from combination methods which involved chemical as well as enzymatic retting solution were then examined. Thus, properties of the resulting fibres were compared with each other and based on these the best retting formulation for pineapple leaf fibres was suggested. This new retting formulation perhaps can be applied in textile industries especially in textile composite in order to produced high quality of pineapple leaf fibres.